

SOME ARACHNIDA FROM CALIFORNIA.

BY NATHAN BANKS.

PLATES XXXVIII-XLI.

THE following pages include a list of spiders and other Arachnida sent me for determination by the California Academy of Sciences, together with other Californian material received from several collectors.

The arachnid fauna of California is undoubtedly very large, so that this list is far from complete; yet it is full enough to show some of the more striking peculiarities of the fauna. The abundance of Pseudoscorpions and Phalangidæ is not equaled elsewhere in the country. There is a larger proportion of Thomisidæ and Drassidæ than is found in the eastern parts of the country. In Southern California there are a few species of a tropical aspect. In the northern parts, particularly from Mount Shasta, there are various spiders common to the northern parts of this country and of Europe. It is a notable fact that these northern spiders extend farther southward in California than they do in the Eastern States. Since Atlantic latitudes are colder than Pacific ones, it follows that these spiders flourish in California in a much warmer average temperature than they are accustomed to in the East.

Altogether there are two hundred and six Arachnida recorded in this list; one hundred and fifty-three spiders, and fifty-three of the other groups. The spiders belong to twenty-one families, eight of which are represented by but one species each. The largest family is the Attidæ with twenty-four species; then follows the Theridiidæ with twenty; the Epeiridæ and Thomisidæ each have eighteen. Of the other groups the Acarina and Phalangida have each nineteen species.

The types of the new species from the Academy's collection are in the Academy, the others are in the author's collection.

ARANEIDA.

THERAPHOSIDÆ.

Bothriocyrtum californicum Cambridge.

Cteniza californica Cambridge. Trap-door Spid. II, 1874, p. 260.

One female from Southeast Farallon Islands, July (L. M. Loomis); others from Los Angeles (Davidson).

Actinoxia versicolor Simon. Liste des espèces . . . Aviculariides, 1892, p. 14.

One female from Santa Clara County, July (Eisen); young from Sierra County, August (Fuchs); two from Black Mountain (Doane.)

Hexura picea Simon. Bull. Soc. Zool. France, 1884, p. 316.

One young specimen from Coulterville, Mariposa County, July (Eisen).

Brachythele longitarsus Simon. Ann. Soc. Ent. France, 1891, p. 305.

Several specimens from Fresno County (Clark); St. Helena, Napa County, July (Fuchs); Laundry Farm, Alameda County, July (Fuchs); San Francisco, June (Eisen).

Atypoides riversi Cambridge. Proc. Zool. Soc. London, 1883, p. 355.

Described from California. I have one from Black Mountain (Doane).

Atypoides californica Banks. Journ. N. Y. Ent. Soc. 1896, p. 88.

One specimen from Black Mountain, 23 October (Doane).

Eurypelma californica *Ausserer*. Verh. zool.-bot. Ges.
Wien, 1871, p. 214.

E. steindachneri *Ausserer*. Ibid. 1875, p. 199.

Three specimens from Santa Cruz (M. Ankellie); one from Putnam Ridge, Fresno County (Clark); others from Claremont, October (Baker), and Los Angeles (Hutchinson).

FILISTATIDÆ.

Filistata hibernalis *Hentz*. Spid. U. S. 1875, p. 24.

One specimen from Mill Valley, Marin County, 30 July (Fuchs); also from Los Angeles (Davidson).

PHOLCIDÆ.

Pholcus phalangoides *Fuessl*. Verz. d. Schweizer Insekten, 1775.

One female from Laundry Farm, Alameda County, May (Fuchs); others from Los Angeles (Davidson and Hutchinson).

Physocyclus globosus *Taczanowski*. Horae Soc. Ent. Ross. x, 1874, p. 105.

Pholcus gibbosus *Keyserling*. Verh. zool.-bot. Ges. Wien, 1877, p. 208.

From Laundry Farm, Alameda County, July (Fuchs).

SCYTODIDÆ.

Diguetia canites *McCook*. Spid. U. S. 11, 1892, p. 135.

Specimens from San Diego, and Los Angeles (Davidson).

LEPTONETIDÆ.

Leptoneta californica n. sp.

PLATE XXXVIII, FIG. 11.

Length ♀ 2.5 mm.; femur 1, 2 mm. Cephalothorax and sternum red-brown, both with a black margin; eyes on black spots; mandibles, legs, and palpi yellow-brown; abdomen gray above, marked transversely with blackish

behind, venter blackish. Cephalothorax rather broad, highest at dorsal groove, sloping to eye-region; eyes six, two behind close together, elliptical, two in front just touching, and one each side touching the tip of the anterior one, the latter seen in front are elevated; palpi very long and slender; legs slender, the anterior femora slightly thicker toward base, the hind femora bowed, metatarsi much longer than tarsi, all clothed with fine hairs, a few long spines on hind tibiae; abdomen high, globose, region of epigynum swollen; sternum as broad as long, truncate in front, sides rounded.

One specimen from Mt. Diablo, Contra Costa County, June (Fuchs).

This genus is separated from the other Leptonetids by the position of the eyes; this is the first species known in our country.

DYSDERIDÆ.

Segestria pacifica Banks. Can. Entom. 1891, p. 209.

From Mt. Shasta, and from an oak-gall, Claremont.

DRASSIDÆ.

Pæcilochoa pacifica Banks. Plate xxxix, Fig. 14. Banks, Journ. N. Y. Ent. Soc. 1896, p. 89.

Two specimens from Downieville, Sierra County, August (Fuchs); Stanford University and Claremont (Baker).

Pæcilochoa montana Emerton. Trans. Conn. Acad. Sci. VIII, 1890, p. 11.

A pair from Claremont (Baker). The male has a transverse white band on abdomen (instead of the two spots); the femora are black, the rest of the legs very pale; the tibia of palpus has a heavy spur on the outside, narrowed toward tip, lying upon the edge of the tarsus.

Drassinella n. gen.

Cephalothorax with short groove; eyes as in *Pæcilochoa*, except that the S. E. are not their diameter apart, the posterior row being straight and longer than front row, with the M. E. nearer to P. S. E. than to each other. Mandibles slightly geniculate, no large tooth below, only one or two small ones. Legs long and slender; tibiae I and II with two rows, each of five

spines, below, the last its length before tip; three such pairs under these metatarsi, hind tibiae with a median and apical pair below, none above; tarsi weakly scopulate; lip rather broader than long; spinnerets not very long.

Drassinella modesta n. sp.

PLATE XXXIX, FIG. 33.

Cephalothorax, mandibles, and legs dull yellowish brown, the latter paler on tarsi; sternum pale yellow-brown, dark on margin; abdomen dark gray above, with black hair; venter gray. Cephalothorax rather short; P. M. E. oval, more than longest diameter apart, a little nearer to nearly equal P. S. E.; A. M. E. about diameter apart, not one-half so far from slightly larger A. S. E. Quadrangle of M. E. much broader behind than in front; S. E. separate by about one-half diameter, equal. Sternum broadest at coxae II, pointed behind, and but little longer than broad. Under tibiae I and II after the large spines, are several pairs of minute spines. Abdomen nearly twice as long as broad, truncate at base, pointed behind.

Length 3.8 mm.

Two specimens from Santa Catalina Island (Baker).

Megamyrmecon californicum Simon. Plate XL, Fig. 48.

Simon, Ann. Soc. Ent. France, 1893, p. 308.

Two specimens from San Francisco, May (Fuchs); one from Claremont (Baker).

Gnaphosa californica n. sp.

PLATE XXXVIII, FIG. 10.

Cephalothorax yellow-brown, with two black marks forming the V at base of head, side margins narrowly black; mandibles and sternum reddish brown; legs pale yellowish brown, tarsi of anterior legs darker; abdomen black above and below. Cephalothorax rather elongate, but head broad in front; anterior eye-row procurved, the A. M. E. small, about one-half diameter apart, still closer to the very much larger A. S. E.; posterior eye-row strongly recurved, P. M. E. about diameter apart, almost twice as far from the much larger P. S. E., S. E. equal, P. M. E. scarcely oval, and rather larger than the A. M. E. Legs not very long, very hairy, under tibiae I and II usually a median spine and a pair at tip, metatarsi I and II with 2-1 spines beneath, tibiae II and IV without spines above; sternum moderately broad, pointed behind; abdomen rounded at base, not much depressed.

Length 8 to 9 mm.

Two specimens from Claremont (Baker).

Zelotes femoralis n. sp.

PLATE XXXVIII, FIG. 1.

Cephalothorax and mandibles yellow-brown; legs paler on base, beyond middle darker; sternum pale reddish brown; abdomen uniform dark gray; all clothed with black hair. Cephalothorax quite narrow in front: P. M. E. oval, one-half diameter apart, and as close to slightly smaller P. S. E.; A. M. E. nearly as large as the P. M. E., a little more than one-half diameter apart, and closer to the slightly smaller A. S. E., quadrangle of M. E. wider behind than in front. Sternum broadest at coxæ II; lip long and slender. Legs rather short, femora I and II heavy, no spines under tibiæ I or II, one under metatarsi I and II; hind legs numerous spined, but none above on base of either tibia III or IV; scopulas on tarsi rather weak. Abdomen quite long, but little depressed, with a crest of longer hair on base.

Length 9 mm.

One female from Claremont (Baker).

Zelotes maculata n. sp.

PLATE XL, FIG. 38.

Cephalothorax dull yellowish, darker in front, furrows blackish; mandibles almost red-brown; sternum yellowish, blackish on sides; legs pale dull yellowish; abdomen pale, nearly covered above with black marks, a basal median one, a large one each side of it, and a row of narrow chevrons behind; venter blackish; spinnerets pale. Cephalothorax rather slender, narrow in front; posterior eye-row but little longer than anterior, barely procurved, P. M. E. oval, less than one-half diameter apart, twice as far from equal P. S. E., A. M. E. about diameter apart, almost touching the scarcely larger A. S. E.; mandibles slightly porrect. Legs rather slender, no spines under tibiæ I and II, 1-2 under metatarsi I and II, 2-2-2 under tibiæ III and IV, but none above at base. Sternum not very broad, broadest at coxæ II, but little narrowed in front, pointed behind; abdomen slender, twice as long as broad; spinnerets rather long and slender.

Length 4.5 mm.

One male from Claremont (Baker).

Zelotes pacifica n. sp.

PLATE XXXIX, FIG. 15.

Length ♂ 6.7 mm. Cephalothorax yellow-brown, with black lines on furrows. Posterior eye-row rather longer than anterior, procurved; P. M. E. oval, oblique, their hind ends quite close together; A. M. E. full as large, round, more than their diameter apart, much closer to A. S. E.; S. E. smaller. Mandibles red-brown, moderate, vertical. Sternum truncate at

base, broadest in the middle, and pointed behind. Legs rather long, pale yellowish, anterior tibiae rather more reddish, all with long hairs, no spines under tibia or metatarsus I, one under metatarsus II near middle, hind pairs with many spines; I pair rather short, IV pair longest. The abdomen depressed, nearly twice as long as broad, truncate at base where there are many long hairs; blackish, with a black basal spear-mark, and each side of it a few pale dots, and behind are several pale chevrons. Venter blackish, with two submedian pale lines reaching spinnerets. Palpal organ moderately long, a long blunt projection from the tibia over the tarsus.

One specimen, Santa Rosa Island, July (Eisen).

Herpyllus angustus n. sp.

PLATE XL, FIG. 43.

Cephalothorax rather bright yellowish brown, margin black, mandibles and sternum similar; legs rather paler, except the femora, especially the anterior pair, are much darker, all with long black hair; abdomen black above and below, above with fine white hair. Cephalothorax rather slender, head narrow; legs thick and stout, especially leg I, tibiae I and II with one spine at tip beneath, metatarsi I and II with a pair near base, a spine at base of tibia III above, none on tibia IV above, but 2-2-2 below, about four very stout spines above on each femur, scapulas moderately dense; sternum slender, considerably narrowed in front, pointed behind; abdomen truncate at base with a dense crest of black hair, depressed, and about twice as long as broad; lower spinnerets very large and prominent; male palpi short. Posterior eye-row straight, longer than the front row, P. M. E. round, about diameter apart, and a little closer to the equal P. S. E.; anterior eye-row straight, A. M. E. close together, and almost touching the slightly larger A. S. E., S. E. more than diameter apart.

Length 6 mm.

One male from San Pedro (Cockerell).

Herpyllus californicus Banks. Journ. N. Y. Ent. Soc.
1904, p. 110.

Described from Lakeside, California.

Herpyllus validus Banks. Plate xxxix, Figs. 25 and 29.
Banks, Trans. Amer. Ent. Soc. xxiii, 1896, p. 62.

Described from Los Angeles; also seen from Claremont (Baker).

Callilepis insularis Banks. Can. Entom. 1900, p. 97.

Described from Guadeloupe Island, off California, June.

Drassodes californica n. sp.

PLATE XXXVIII, FIG. 8; PLATE XXXIX, FIG. 28.

Length ♂ 9 mm.; tibia plus patella iv 5 mm. Cephalothorax, legs, and sternum dark yellowish brown, mandibles more reddish brown, abdomen brown above and below. Cephalothorax much narrowed in front; anterior eye-row nearly straight, A. M. E. large, less than their diameter apart, less than their radius from the slightly smaller A. S. E.; posterior eye-row longer, procurved, but the S. E. separated by about their diameter, P. M. E. small, fully their diameter apart, about twice their diameter from the slightly larger P. S. E.; M. E. form a quadrangle much higher than broad, and about equally wide in front and behind; mandibles rather small, vertical; sternum plainly longer than broad, broadest at coxæ II, pointed behind; legs quite long and slender, two pairs of spines under, and one at inner tip of tibiæ I and II, these metatarsi with one pair of spines under the base, rest with scopulas, hind legs more numerous spined, one spine above on hind tibiæ, 3-3 below; abdomen depressed, truncate at base, blunt-pointed behind, nearly twice as long as broad; body clothed with whitish hair above; male palpi short, the tibia with a short pointed process on the outer tip. A shield on base of male abdomen above.

Two males, Downieville, Sierra County, August (Fuchs); and Marin County (Vaslit).

CLUBIONIDÆ.

Gayenna californica n. sp.

PLATE XXXVIII, FIG. 2.

Length 5.5 mm. Cephalothorax yellowish, with two irregular brownish marks each side, eyes on black spots, those of the P. M. E. usually elongate behind, mandibles dark, legs and sternum pale yellowish, the former with dark spots at the bases of the spines, abdomen pale grayish, with red-brown spots above, the principal ones outlining a triangle at base, and behind are two converging lines of dots, smaller ones on the sides, venter mostly immaculate, but usually one prominent spot in the middle just basad of the furrow. Cephalothorax narrowed in front; P. M. E. about their diameter apart, closer to the equal P. S. E.; A. M. E. smaller; mandibles small, vertical; legs rather short and stout, two pairs of spines under tibiæ I and II, more on hind pairs; sternum plainly longer than broad, sides rounded, pointed behind; abdomen one and one-half times longer than broad, pointed behind, rounded at base; ventral furrow not reaching middle of venter; epigynum shows two reddish lines each side, and in front two dark oblong spots.

Several specimens, Mill Valley, Marin County, May (Fuchs); Palo Alto (Doane).

Chiracanthium inclusa Hentz. Spid. U. S. 1875, p. 85.

One specimen from Mill Valley, Marin County, May (Fuchs); also from Claremont (Baker).

Clubiona pacifica Banks. Trans. Amer. Ent. Soc. xxiii, 1896, p. 65.

One female from Mt. Shasta (Lembert).

Anyphæna sp.

Immature specimens from Palo Alto. Similar to *A. gracilis* Hentz. It is pale yellowish, with two narrow gray stripes on the cephalothorax and abdomen; mandibles and clypeus black.

Micaria palliditarsus Banks. Trans. Amer. Ent. Soc. xxiii, 1896, p. 59.

Described from Southern California.

Castaneira crocata Hentz. Spid. U. S. 1875, p. 93.

Two females from Claremont (Baker).

Trachelas tranquilla Hentz. Spid. U. S. 1875, p. 89.

One female from mountains near Claremont (Baker).

Trachelas californica n. sp.

PLATE XL, FIG. 47.

Cephalothorax uniform dull red-brown; scarcely roughened, the erect hairs upon tiny tubercles; dorsal groove very short. Mandibles scarcely paler than cephalothorax, slightly divergent. Posterior eye-row very plainly recurved; the P. M. E. one and one-half their diameter apart, and as far from the scarcely larger P. S. E., which are nearly their diameter from the smaller A. S. E.; A. M. E. about their diameter apart, closer to the slightly larger A. S. E.; quadrangle of M. E. higher than broad, and broader behind than in front. Legs with femora pale yellow, beyond more brownish yellow, tips of hind tibiæ and metatarsi nearly black; no spines, but many hairs, the anterior tibiæ, metatarsi, and tarsi quite densely black-haired beneath. Sternum yellow-brown, broadest at coxæ II. Abdomen rather depressed, truncate at base, pale brownish yellow above, a slender black basal spear-mark, two submedian black dots, and faint black marks on posterior sides, tending to form chevrons.

Length 5 mm.

One female from Claremont (Baker).

ZOROPSIDÆ.

Lutica maculata Marx. Proc. Ent. Soc. Wash. III, 1892,
p. 33.

Two specimens, July (Eisen). A very interesting species, and the only representative of the family in this country.

AGALENIDÆ.

Agalena pacifica Banks. Journ. N. Y. Ent. Soc. 1896,
p. 89.

Agalena curta McCook. Amer. Spid. II. [No description].

Specimens from Marin County (Vaslit); St. Helena, Napa County, July (Fuchs); Stanford University; Claremont and Santa Catalina Island (Baker).

Agalena californica Banks. Journ. N. Y. Ent. Soc. 1896,
p. 89.

Described from Black Mountain (Doane); also seen from Stanford University, and Claremont, October (Baker).

Tegenaria derhami Scopoli. Entom. Carnioli, 1763, p. 400.

Specimens from San Francisco (Fuchs) and Santa Clara County (Baker).

Tegenaria californica Banks. Journ. N. Y. Ent. Soc. 1896, p. 90.

Mt. Diablo, Contra Costa County (Fuchs); Stanford University (Doane).

Cybæus reticulatus Simon. Ann. Soc. Ent. Belg. 1886,
p. 56.

One from San Francisco, July (Fuchs).

Cybæus minor n. sp.

PLATE XXXVIII, FIG. 4; PLATE XL, FIG. 44.

Cephalothorax, legs, and sternum yellowish brown, the anterior part of cephalothorax and the anterior legs beyond femora more reddish; mandibles reddish brown; abdomen black above, an indistinct median, basal pale line, and five pairs of submedian white spots, the posterior ones oblique and more or less connected; venter pale. Posterior eye-row faintly recurved, the P. M. E. a little more than diameter apart, and barely so far from the equal P. S. E.; A. M. E. much smaller than the other eyes, about diameter apart, and farther from the much larger A. S. E. Mandibles strongly geniculate at base, tibiae I and II with 2-2 spines beneath, metatarsi I and II, with 2-2-2; tibia III with 2-2-2 beneath, metatarsus III with 2-2; tibia IV with 1-1-1.

Length ♂ 4.8 mm.; ♀ 5 mm.

A pair from Claremont (Baker).

Chorizomma californica Simon. Bull. Soc. Zool. France, 1895, p. 136.

Two specimens from San Francisco, September (Carlson).

Cybæodes (?) *incerta* Banks. Can. Entom. 1898, p. 185.

The type is from Salton, California, March (Hubbard).

DICTYNIDÆ.

Amaurobius nevadensis Simon. Bull. Soc. Zool. France, ix, 1884, p. 12.

Several specimens, some from Marin County (Vaslit); Sierra County, August (Fuchs); Pine Ridge, Fresno County (Clark).

Amaurobius pictus Simon. Bull. Soc. Zool. France, ix, 1884, p. 13.

San Francisco (Troyer); Marin County (Vaslit).

Dictyna sublata Hentz. Spid. U. S. 1875, p. 147.

One from Lake Tahoe, Placer County, July (Troyer); one from Laundry Farm, Alameda County (Fuchs); Palo Alto, July (Doane); Claremont and Santa Clara County (Baker).

Dictyna volucripes Keyserling. Verh. zool.-bot. Ges.
Wien, 1881, p. 286.

Specimens from Claremont and Palo Alto (Baker).

Dictyna sp.

One female from San Francisco (Fuchs), possibly new.

Dictyna calcarata n. sp.

PLATE XL, FIG. 42.

Cephalothorax red-brown, clothed with pale hair; mandibles red-brown; legs pale yellowish, beneath with black marks near middle and apex of each joint, except tarsus and patella, the marks on hind tibiae surround the joint; sternum yellowish; abdomen whitish, with a median black spot in basal third, and behind is a series of black spots each side approaching near tip. Cephalothorax broad, head high, narrow, and long; mandibles slender, concave in front, not bowed out; legs rather more slender than usual; abdomen oval; male palpus has an enormous spur from the upper part of the tibia, which is itself a short joint.

Length 2.5 mm.

One male from San Pedro (Cockerell).

Dictynina n. gen.

Similar in all important respects to *Dictyna*, but with the cribellum distinctly divided on the middle line; no spines on the legs.

Type, *D. pallida*.

Dictynina pallida n. sp.

PLATE XXXIX, FIG. 22.

Cephalothorax pale, with the sides red-brown, leaving a white margin; legs pale, clothed with black hair; sternum brown; abdomen whitish, with an oblong median area of black hair in basal part, but not reaching base, and behind is a row of three black spots each side, more or less connected; venter with a brown median stripe, and spinnerets brown. Cephalothorax rather narrow; anterior eye-row straight, A. M. E. about diameter apart, closer to the equal A. S. E.; posterior eye-row a little procurved, P. M. E. about one and one-half diameter apart, and about as far from the nearly

equal P. S. E.; quadrangle of M. E. as wide behind as long, and a little wider behind than in front; legs quite long, without spines, but with many long hairs; abdomen oblong elliptical.

Length 3.1 mm.

Two females from Mt. Shasta (Lembert).

Dictyolathys californica n. sp.

PLATE XXXVIII, FIG. 7; PLATE XL, FIGS. 40 AND 46.

Cephalothorax pale yellow, black around eyes, a narrow triangular blackish spot over dorsal groove; mandibles pale; legs pale yellowish, tibiae and metatarsi darker; sternum blackish; abdomen pale, above with broad connected black bands which occupy most of the surface, these leave two large pale spots each side on anterior part, and behind five pale bands, the apical ones reaching sides; the sides streaked with black, connected to black above; venter with a black stripe each side connected to black surrounding spinnerets, and a short median black stripe. Cephalothorax rather broad in front, clypeus very low; both eye-rows strongly procurved, the A. M. E. very small, about diameter apart, and three times as far from the very much larger A. S. E., which are equal to the other eyes; P. M. E. fully diameter apart, and about as far from the nearly equal P. S. E. Mandibles vertical, not divergent; sternum broad, broadest behind coxæ II, pointed behind; abdomen elliptical, slightly depressed. Body and legs with many fine hairs, no spines.

Length 1.5 mm.

One female from Palo Alto (Baker).

THERIDIIDÆ.

Theridium tepidariorum Koch. Die Arachn. VIII, 1840, p. 75.

San Francisco, two specimens, August (Fuchs); Los Angeles (Davidson); Lakeside (Baker).

Theridium placens Keyserling. Spinn. Amer., Therid. (1) 1884, p. 71.

San Francisco, July (Fuchs); Lake Tahoe, Placer County, July (Troyer); Palo Alto, July (Baker); Mt. Shasta (Lembert).

Theridium differens Emerton. Trans. Conn. Acad. Sci. VI, 1882, p. 9.

Several from Palo Alto (Baker) and Mt. Shasta (Lembert).

Theridium fordim *Keyserling*. Spinn. Amer., Therid. (1) 1884, p. 23.

From Santa Cruz Island, 23 July.

Theridium californicum n. sp.

PLATE XXXIX, FIG. 34.

Length ♀ 2.2 mm., tibia plus patella 1 2.8 mm. Cephalothorax, legs, sternum, and mandibles white; abdomen yellow above, with a large, oblong, brown spot reaching from base to near tip, and sometimes containing two yellow spots near the middle, venter pale. Posterior eye-row straight, equal in size, P. M. E. slightly more than their diameter apart, and about as far from the P. S. E., A. M. E. smaller and fully twice their diameter apart, closer to the equal A. S. E., S. E. rather larger; mandibles moderately vertical; sternum triangular, rather longer than broad, broadest and truncate in front, truncate behind between the hind coxæ; legs long and slender, femur I much longer than the cephalothorax, more than twice as long as femur III, tibia I shorter than metatarsus I, all clothed with fine hairs and a few slender spines; abdomen plainly longer than broad, rather high and convex; epigynum shows a dark triangular area, with the angles truncate, and containing two darker roundish spots.

Two specimens, Mill Valley, Marin County, 30 May (Fuchs).

Theridium sexpunctatum *Emerton*. Trans. Conn. Acad. Sci. VI, 1882, p. 12.

One adult male from Mill Valley, Marin County, May (Fuchs). Not previously recorded from the West Coast, but I have specimens from Washington State.

Latrodectes mactans *Koch*. Die Arachn. VIII, 1840, p. 115.

Several specimens from Marin County (Vaslit); Fresno County (Bellman); Santa Rosa Island (Eisen); Mill Valley, Marin County (Fuchs); Claremont; Lakeside; Santa Catalina Island (Baker); Los Angeles (Davidson).

Dipœna pictipes n. sp.

Cephalothorax bright yellowish, margin black, eyes on black spot; mandibles reddish yellow; legs black and whitish; femora and patellæ I and II white above, black beneath, femur II with a pale line, tibiæ and metatarsi black, former narrowly pale above, tarsi whitish; femora III pale, with black stripe on each side; femora IV pale, with black stripe on posterior side; tibiæ III and IV pale above, black beneath, metatarsi black, tips of tibiæ and bases of metatarsi pale, tarsi pale. Sternum bright yellowish, with a narrow black margin; abdomen black above and below, spinnerets pale. Posterior eye-row straight or barely procurved, P. M. E. fully diameter apart, and plainly farther from the equal P. S. E.; anterior eye-row straight, A. M. E. larger than P. M. E., scarcely diameter apart, and rather closer to the smaller A. S. E.; S. E. contiguous. Clypeus higher than the eye-region; sternum broad, nearly as broad in front as long, sides rounded, blunt-pointed between hind coxæ; leg I longest; IV and II subequal; abdomen elliptical, one and one-half times longer than broad, not very high.

Length 2.1 mm.

One specimen from Claremont (Baker).

Euryopis californica n. sp.

PLATE XXXIX, FIGS. 23 AND 36.

Cephalothorax yellow-brown, eyes on black spots; mandibles pale yellowish, legs pale, mottled with black, mostly above, but the femora are below near tip; the tibial marks are more or less connected above; sternum pale. Abdomen silvery white, with a dark triangular spot in middle of dorsum, black on its posterior angle, there is also a black mark on each side, near tip of the abdomen, scarcely visible from above; venter silvery.

Structure in general similar to that of *E. funebre*, but the markings of legs different, and the abdominal spot very much smaller.

Length 3.8 mm.

One female from Los Angeles (Davidson).

Euryopis funebre Hentz. Spid. U. S. 1875, p. 148.

San Francisco, one specimen (Troyer).

Steatoda grandis Banks. Proc. Acad. Nat. Sci. Phil. 1901, p. 578.

One female from Claremont (Baker).

Lithyphantes tectus Keyserling. Spinn. Amer., Therid. (1) 1884, p. 138.

A male from Mt. Shasta (Lembert); a female, probably of this species, from Palo Alto (Doane).

Argyrodes jucundus Cambridge. Proc. Zool. Soc. London, 1880, p. 326.

Several from Los Angeles (Davidson) and San Pedro (Cockerell).

Linyphia arcuata Keyserling. Spinn. Amer., Therid. (11) 1886, p. 74.

One example, San Francisco, July.

Linyphia diana Keyserling. Spinn. Amer., Therid. (11) 1886, p. 68.

A female from Palo Alto (Doane).

Linyphia phrygiana Koch. Die Arachn. III, 1836, p. 83.

Several specimens from Palo Alto (Doane).

Linyphia rubrofasciata Keyserling. Spinn. Amer., Therid. (11) 1886, p. 66.

One female from Mt. Shasta (Lembert).

***Bathyphantes pallidula* n. sp.**

PLATE XL, FIG. 45.

Cephalothorax, sternum, and legs pale yellowish, mandibles scarcely darker, abdomen rather grayish white. Cephalothorax moderately slender; anterior eye-row straight, A. M. E. small, close together; more than two diameters from the very much larger A. S. E., S. E. touching, P. M. E. fully diameter apart, and as far from the equal P. S. E., quadrangle of M. E. very much broader behind than in front. Mandibles rather long, vertical, not divergent, with a small tooth in front below, fang-groove excavate as seen from in front. Legs slender, femur 1 one-fourth longer than the cephalothorax, tibia 1 longer than femur, metatarsus 1 as long as femur, tarsus two-thirds of the metatarsus. Sternum very broad, broadest in front, pointed between hind coxæ; abdomen subcylindric, pointed at tip; body and legs quite hairy. Male palpal organ very large and complicated, dark red-brown; the hook is elbowed in the middle.

Length 2.7 mm.

One male from Claremont (Baker).

Lophocarenum fasciatum n. sp.

PLATE XXXIX, FIGS. 20, 21, AND 24.

Cephalothorax yellowish, side-margins black, eyes on black spots; legs pale on femora, beyond more yellow; mandibles and sternum yellowish; abdomen pale, with a broad basal black band, and behind six interrupted black bars, sides streaked with black; venter pale, with a broad black area back of lung-slits connected to the upper basal band, and a large black spot each side near base of spinnerets. Cephalothorax of male elevated just behind eyes, not very high, with a round hole each side. A. M. E. small, close together, P. M. E. large, their diameter apart, rather closer to the equal P. S. E. Mandibles without tooth in front; legs short, hairy; sternum broadly truncate between hind coxæ, broadest on front margin; abdomen short, no shield above. Male palpi have basal joints very heavy, a long, slender, curved tibial hook, and the bulb tipped with a spiral tube, making two and one-quarter turns.

Length 1 mm.

One male from Claremont (Baker).

Erigone californica n. sp.

PLATE XXXVIII, FIG. 3.

Length ♂ 2.2, ♀ 2.7 mm. Cephalothorax blackish, legs pale yellowish, mandibles yellow-brown, sternum dark, abdomen blackish, or dark gray above and below. Head of male elevated, margins with several teeth, two large ones each side on posterior part, and several on anterior sides; eyes with P. M. E. rather closer to each other than to P. S. E., A. M. E. as large as P. M. E. and slightly closer together, less than their diameter apart; mandibles large, a hump on each side near base, a large tooth on lower edge and several small ones, on the outer edge are two large, curved teeth slightly below the middle, and above them is a row of smaller ones; maxillæ below with a large tooth on outer side; legs moderately long, hairy; abdomen with short fine hairs. Male palpi long, with numerous short teeth on femur, one on outer tip, a large one under middle of tibia, and a large projection below the tip, tarsus rather longer than the tibia, a spine on the base of the swelling. In the female there is only a trace of the teeth on the mandibles. Some males are larger, with larger spines and redder cephalothorax and mandibles.

Laundry Farm, Alameda County, May (Fuchs); Mill Valley, Marin County, May (Fuchs); Mariposa County, July (Eisen); Santa Rosa Island, 20 May; Claremont (Baker).

MIMETIDÆ.

Mimetes interfector *Hentz.* Spid. U. S. 1875, p. 138.

From Claremont (Baker) and Palo Alto (Doane).

EPEIRIDÆ.

Epeira angulata *Clerk.* Svensk. Spindl. 1757, p. 22.

St. Helena, Napa County, July (Fuchs); Calaveras Creek, Alameda County, June (Fuchs); Los Angeles (Davidson).

Epeira gemma *McCook.* Proc. Acad. Nat. Sci. Phil. 1888, p. 193.

Marin County (Vaslit); Yreka, Siskiyou County, June (Fuchs); Laundry Farm, Alameda County, April (Fuchs); St. Helena, Napa County, July (Fuchs); Downieville, Sierra County, August (Fuchs); Santa Rosa Island, July (Eisen); Los Angeles (Davidson); Claremont and Santa Clara County (Baker).

Epeira pacifica *McCook.* Amer. Spid. III, 1894, p. 180.

E. excelsa Banks. Journ. N. Y. Ent. Soc. 1896, p. 90.

Laundry Farm, Alameda County, April (Fuchs); Mill Valley, Marin County, May (Fuchs); Sebastopol, Sonoma County (Fuchs); Stanford University and Claremont (Baker).

Epeira patagiata *Clerk.* Svensk. Spindl. 1757, p. 38.

Laundry Farm, Alameda County, April (Fuchs); Sierra County, August (Fuchs); Mill Valley, Marin County, 30 May (Fuchs); San Francisco (Fuchs).

Epeira trifolium *Hentz.* Spid. U. S. 1875, p. 110.

San Francisco, August (Fuchs); Downieville, Sierra County, August (Fuchs).

Epeira labyrinthea *Hentz.* Spid. U. S. 1875, p. 111.

Marin County (Vaslit); Santa Rosa Island, July (Eisen); Mill Valley, Marin County, 30 May (Fuchs); Los Angeles (Davidson), Palo Alto (Doane); Claremont (Baker).

Epeira displicata *Hentz.* Spid. U. S. 1875, p. 117.

Mill Valley, Marin County, May (Fuchs); Sebastopol, Sonoma County, July (Fuchs); Mt. Shasta (Lembert).

Epeira oacensis *Keyserling.* Sitzungsber. Isis, Dresden, 1863, p. 121.

Specimens from San Pedro (Cockerell); Palo Alto (Doane); Los Angeles (Davidson).

Epeira conchlea *McCook.* Proc. Acad. Nat. Sci. Phil. 1888, p. 199.

One female from Claremont (Baker).

Zilla californica *Banks.* Journ. N. Y. Ent. Soc. 1896, p. 90.

Laundry Farm, Alameda County, April (Fuchs); San Francisco (Fuchs); Mt. Diablo, Contra Costa County (Fuchs); San Pedro (Cockerell); Palo Alto (Doane); Santa Clara County and Claremont (Baker).

Cyclosa conica *Pallas.* Spicilog. Zoolog. 1, 1772, p. 48.

Laundry Farm, Alameda County, May (Fuchs); Mill Valley, Marin County, May (Fuchs); Los Angeles (Hutchinson).

Cyclosa index *Cambridge.* Biol. Centrali-Amer., Arach.-Aran. 1, p. 51.

Mt. Diablo, Contra Costa County (Fuchs); Sebastopol, Sonoma County (Fuchs); Laundry Farm, Alameda County (Fuchs).

Cyrtophora californiensis *Keyserling.* Verh. zool.-bot. Ges. Wien, 1884, p. 525.

Epeira bucardia *McCook.* Amer. Spid. III, 1894, p. 183.

One specimen from Mill Valley, Marin County, May (Fuchs); others from Palo Alto (Doane); Mt. Shasta (Lembert).

Ordgarius cornigerus Hentz. Spid. U. S. 1875, p. 123.

A few from Los Angeles (Hutchinson). Mr. Hutchinson has described the curious manner in which this species catches insects (Scient. Amer. v. 89, 1903, p. 172).

Argiope aurantia Lucas. Ann. Soc. Ent. France, 1833, p. 86.

Epeira riparia Hentz. Spid. U. S. 1875, p. 106.

Hollister, San Benito County (Ludwig); Downieville, Sierra County, August (Fuchs); Marin County (Vaslit).

Argiope argentata Fabricius. Entom. System. II, 1793, p. 414.

Specimens from Los Angeles (Davidson); San Pedro (Cockerell); Santa Rosa Island, July (Eisen).

Argiope trifasciata Forskael. Descript. animal. 1775, p. 86.

A. transversa Emerton. Trans. Conn. Acad. Sci. VI, 1882, p. 330.

San Francisco, June (Eisen); Marin County (Vaslit); St. Helena, Napa County (Fuchs); Los Angeles (Hutchinson).

Leucauge hortorum Hentz. Spid. U. S. 1875, p. 118.

A few specimens from Los Angeles (Hutchinson).

TETRAGNATHIDÆ.

Tetragnatha extensa Linnæus. Syst. Nat. ed. XI, p. 621.

Laundry Farm, Alameda County, April (Fuchs).

Tetragnatha laboriosa Hentz. Spid. U. S. 1875, p. 131.

Laundry Farm, Alameda County, April (Fuchs); St. Helena, Napa County, July (Fuchs); Downieville, Sierra County, August (Fuchs); Los Angeles (Davidson); Palo Alto (Doane); Mt. Shasta.

ULOBORIDÆ.

Uloborus californicus n. sp.

PLATE XXXIX, FIG. 35.

Length ♀ 4 mm., tibia plus patella 1, 2 mm. Cephalothorax dark brown or reddish, paler behind; leg I, femora brown (or reddish), with a pale spot below beyond middle, patellæ dark, tibia dark, base narrowly pale, metatarsi pale, with apical half dark (reddish); leg II, pale, apex of femora, most of patellæ, apex of tibiæ and base and apex of metatarsus dark (or reddish); hind legs, femora dark (or reddish), with a pale ring beyond middle, patella dark, tibiæ with a pale ring at base and before middle, and a dark ring on middle and apex of metatarsus, and often a band on the tarsi; sternum dark; abdomen dark on sides, pale above, more or less marked with dark spots, venter paler than sides, with a dark mark before the spinners and a small yellowish spot each side of it. Of the usual shape, the abdominal humps are more prominent than in the northern specimens of *U. plumipes*, none of the specimens show any trace of a brush on anterior tibiæ, one small spine above on tibia I beyond the middle, Epigynum shows two pale processes, suddenly narrowed on the inner side, convex outward.

St. Helena, Napa County, July (Fuchs). Readily separated from the eastern species by the dark apical half of the anterior metatarsi.

THOMISIDÆ.

Xysticus californicus *Keyserling*. Plate xxxix, Fig. 27;
Plate XL, Fig. 41. Keyserling, Spinn. Amer. I,
1880, p. 37.

Coulterville, Mariposa County, July (Eisen); Downieville, Sierra County, August (Fuchs); Santa Rosa Island, July (Eisen); Los Angeles (Davidson); Claremont and Elsinore (Baker).

Xysticus formosus *Banks*. Proc. Acad. Nat. Sci. Phil.
1892, p. 56.

One female from Mt. Shasta (Lembert).

Coriarachne brunneipes *Banks*. Journ. N. Y. Ent. Soc.
1893, p. 133.

One male from Mt. Shasta (Lembert).

Runcinia californica Banks. Can. Entom. 1900, p. 99.

Specimens from Los Angeles (Davidson) and Claremont (Baker).

Runcinia aleatoria Hentz. Spid. U. S. 1875, p. 77.

Coulterville, Mariposa County, July (Eisen); San Francisco (Fuchs).

Misumena vatia Clerk. Svensk. Spindl. 1757, p. 128.

San Francisco, July (Fuchs).

Misumena importuna Keyserling. Verh. zool.-bot. Ges. Wien, 1881, p. 307.

Marin County (Vaslit); Mill Valley, Marin County, 30 May (Fuchs); Santa Clara County (Baker).

Misumena californica Banks. Journ. N. Y. Ent. Soc. 1896, p. 91.

Coulterville, Mariposa County, July (Eisen); Laundry Farm, Alameda County, June (Fuchs); Mill Valley, Marin County, June (Fuchs); Los Angeles (Davidson).

Misumessus pictilis Banks. Jour. N. Y. Ent. Soc. 1896, p. 91.

Described from Palo Alto.

Misumessus pallidulus Banks. Journ. N. Y. Ent. Soc. 1904, p. 112.

Described from San Francisco.

Tmarus magniceps Keyserling. Spinn. Amer., Later. 1880, p. 158.

From Los Angeles (Davidson). Described from California.

Thanatus coloradensis Keyserling. Spinn. Amer., Later. 1880, p. 206.

Specimens from Claremont, October (Baker); and Zebra, Madera County, September (Miss Lorensen).

Tibellus duttoni Hentz. Spid. U. S. 1875, p. 81.

One specimen from St. Helena, Napa County, July (Fuchs); others from Elsinore and Santa Clara County (Baker).

Tibellus oblongus Walckenaer. Faun. Paris, 11, 1802, p. 228.

Several specimens from Palo Alto, September; Santa Clara County (Baker).

Philodromus rufus Walckenaer. Faun. franc. Arach. 1806, p. 91.

P. pictus Emerton. N. Eng. Thomisidæ, p. 373.

Several specimens from Coulterville, Mariposa County, July (Eisen), and Mill Valley, Marin County, May (Fuchs).

Philodromus sp.

Two specimens of a species not known to me from Downieville, Sierra County (Fuchs) and Laundry Farm, Alameda County (Fuchs).

Philodromus californicus Keyserling. Verh. zool.-bot. Ges. Wien, 1883, p. 676.

One female from Santa Clara County (Baker); described from the State.

Philodromus mæstus n. sp.

PLATE XXXIX, FIGS. 26 AND 30.

Cephalothorax pale brownish on sides, and in front, leaving a broad median whitish area; mandibles pale; legs pale, darker on the tibiae; sternum pale; abdomen pale reddish brown, an oblong whitish spot each side on base, and smaller, rather indistinct, spots behind, more or less connected in pairs; venter pale. Cephalothorax a trifle longer than broad; P. M. E. almost three diameters apart, hardly half so far from the equal P. S. E., A. M. E. smaller, two diameters apart, and as far from the larger A. S. E., the latter barely if any closer to P. M. E. than to P. S. E. Legs slender, tibiae I and II with 2-2 spines beneath. Abdomen nearly twice as long as broad, depressed.

Length 3.2 mm.

One male from Santa Clara County (Baker).

SPARASSIDÆ.

Olios fasciculatus Simon. Act. Soc. Linn. Bordeaux, 1880,
p. 307.

Olios abnormis Keyserling. Verh. zool.-bot. Ges. Wien, 1882, p. 679.

Sadala simonii Cambridge. Biol. Centrali-Amer., Arach.-Aran. 1,
1890, p. 65.

Specimens from Zebra, Madera County, September
(Miss Lorenson); Los Angeles (Davidson); Claremont
(Baker).

LYCOSIDÆ.

Lycosa pacifica n. sp.

PLATE XXXVIII, FIG. 6.

Length ♂ 14 mm; tibia and patella iv, 8 mm.; ♀ 18-20 mm. long. Cephalothorax with a pale stripe in middle, scarcely wider on head, a broader brown stripe each side, a narrow pale one on each side, and the margin narrowly brown; sternum pale yellowish; legs pale, darker on tarsi and anterior metatarsus and on tips of hind tibiæ and metatarsi, some small dark elongate spots above on femora; abdomen with a broad pale stripe from base to tip, broadest at base and there containing a dark spear-mark, which is black on the sides, brown on the middle; outside of the pale there is a brown stripe each side; sides and venter pale. Four pairs of spines under tibiæ I and II, three pairs in female. Epigynum shows a dark spot each side and one behind. Some specimens show a dark stripe each side on venter, and the sternum has a dark mark each side united behind.

St. Helena, Napa County, July (Fuchs); Coulterville,
Mariposa County, July (Eisen); Santa Rosa Island, July
(Eisen); Claremont (Baker); Santa Cruz Island, 23 July.

Lycosa brunneiventris Banks. Journ. N. Y. Ent. Soc.
1894, p. 50.

Two females from Palo Alto and Claremont (Baker).

Lycosa sp.

One male from Mill Valley, Marin County, May
(Fuchs). It is a small species related to *L. modesta*
Thorell, with a pale dorsal stripe on the cephalothorax,
and dorsum of abdomen pale, black on sides in front;
legs dark. It is probably new.

Lycosa sp.

One female from San Francisco, June (Eisen). It is a small almost black species; quite probably new.

Geolycosa sp.

One specimen from Los Angeles not quite mature; it appears to differ from the two described species.

Pardosa californica *Keyserling*. Plate xxxviii, Fig. 5.
Keyserling, Verh. zool.-bot. Ges. Wien, 1887,
p. 483.

Specimens from Marin County (Vaslit); Mt. Diablo,
Contra Costa County (Fuchs); San Francisco (Fuchs);
Palo Alto, July (Baker).

Pardosa atromedia n. sp.

PLATE XXXIX, FIG. 32.

Cephalothorax pale yellowish; eye-region black, an irregular broad band on each upper side, which indents the middle area before the groove; clypeus with white hair; mandibles pale reddish brown, with white and black hair; sternum black, with pale margins; legs pale yellowish, banded with black; a black spot above on coxæ, two on femora, one on patellæ, two bands on tibiæ, and metatarsi dark at base and tip and less distinctly in the middle of hind pairs, tarsi unmarked. Abdomen pale yellowish with many white hairs, a basal black band under the front, an oblong median black spot at basal third, and beyond are smaller spots more or less distinct; sides streaked with black; venter entirely pale. Cephalothorax rather short; eyes of first row subequal, the M. E. rather farther apart than from S. E., eyes of second row scarcely diameter apart, dorsal eyes a little smaller; legs slender, hind pair very long; tibiæ and metatarsi I and II with 2-2 spines beneath.

Length 7-9 mm.

A few specimens from Claremont and Southern California (Curtice).

Pardosa sternalis *Thorell*.

Lycosa sternalis Thorell. Colo. Aran. 1877, p. 504.

Several specimens from Lake Tahoe, Placer County, July (Troyer); St. Helena, Napa County, July (Fuchs); Mill Valley, Marin County, May (Fuchs.)

Pardosa glacialis *Thorell*.

Lycosa glacialis Thorell. Spiders from Greenland, 1872.

Lycosa concinna Thorell. Colo. Aran. 1877, p. 506.

One pair from Mill Valley, Marin County, 30 May (Fuchs); both specimens very dark colored; others from Mt. Shasta (Lembert).

Sossippus californicus *Simon*. Ann. Soc. Ent. Belg. 1898, p. 25.

Described from the State; I have specimens from Claremont (Baker).

Trochosa cinerea *Fabricius*.

Aranea cinerea Fabricius. Ent. Syst. II, 1793, p. 423.

Lycosa lynx Hahn. Die Arachn. II, 1836, p. 13.

One specimen from Redding, Shasta County, June (H. C. Behr); others from Elsinore (Baker) and Santa Rosa Island, July (Eisen).

Trochosa parva *Banks*. Journ. N. Y. Ent. Soc. 1894, p. 52.

Two specimens from St. Helena, Napa County (Fuchs); also from Santa Rosa Island, July (Eisen).

Pirata californica n. sp.

PLATE XXXIX, FIG. 13.

Length ♀ 5 mm. Cephalothorax yellowish, two brownish lines on front uniting at dorsal groove two broader stripes each side, dentate outwardly; and the side margin brown. Eyes on black spots; mandibles brown; sternum pale yellowish; legs rather brownish, a pale ring beyond middle of each femur, and one on middle of hind tibia. Abdomen brownish above, a pale basal spear-mark and some faint chevrons beyond; venter much paler. Two pairs of spines under tibia I and three pairs under metatarsus I; sternum a little longer than broad, sides rounded; abdomen but little longer or broader than the cephalothorax.

One female, Coulterville, Mariposa County, July (Eisen).

OXYOPIDÆ.

Peucetia viridans *Hentz*. Spid. U. S. 1875, p. 46.

Los Angeles (Davidson).

Oxyopes salticus Hentz. Spid. U. S. 1875, p. 47.

Mill Valley, Marin County, May (Fuchs); Palo Alto, September (Doane); Santa Clara County (Baker).

Oxyopes rufipes Banks. Journ. N. Y. Ent. Soc. 1893, p. 133.

Specimens from Mt. Shasta (Lembert); Santa Clara County (Baker).

Oxyopes acutus Banks. Proc. Calif. Acad. Sci. 3d Ser. Zool. 1, 1898, p. 279.

Coulterville, Mariposa County, July (Eisen); St. Helena, Napa County, July (Fuchs); Mill Valley, Marin County, 30 May (Fuchs). This species has somewhat the appearance of certain species of *Oxyopeidon* from Mexico.

ATTIDÆ.

Phidippus johnsoni Peckham. Descript. Attidæ, 1883, p. 22.

Coulterville, Mariposa County, July (Eisen); Yreka, Siskiyou County, June (Fuchs); Santa Barbara (Fuchs); Los Angeles (Davidson); Palo Alto (Doane); Claremont (Baker).

Phidippus opifex McCook. Proc. Acad. Nat. Sci. Phil. 1878, p. 276.

Two specimens, San Francisco, June (Eisen); Mill Valley, Marin County (Eisen); Los Angeles (Davidson).

Phidippus bicolor Keyserling. Verh. zool.-bot. Ges. Wien, 1884, p. 496.

A pair from Claremont (Baker), a male from Santa Catalina Island (Baker), and a female from San Bernardino County (Dunn).

Dendryphantes octavus Hentz. Spid. U. S. 1875, p. 70.

Sierra County, August (Fuchs); Mill Valley, Marin County, 30 May (Fuchs).

Dendryphantes vitis *Cockerell*. The Entom. 1894, p. 207.

A few specimens from Claremont (Baker).

Dendryphantes guttatus n. sp.

PLATE XLI, FIG. 51.

Length ♀ 8 mm; ♂ 5 mm. Cephalothorax dark brown, clothed with dark hair and white scales, most numerous on front part of eye-region; mandibles red-brown; palpi pale; legs pale, femora mostly dark, patellæ, tibiæ and metatarsi annulate with red-brown at tips; sternum black; abdomen whitish at base, and basal part of sides, above with a large dark spot; small in front near base, at posterior part connected with dark sides, scarcely bronzy, with two submedian rows of four or five white dots and a few on the posterior sides; venter dark brown, with a line of pale dots on each side. Cephalothorax of male dark brown as in female; mandibles red-brown; vertical; legs I and II dark except tarsi; legs III and IV dark, except base of tibia, metatarsus, and all of tarsus; abdomen dark brown, above with white scales most numerous in spots on posterior sides. First leg largest. Tibia of male palpus with a very small projection on outer side at tip, a short stout style, base of bulb much swollen.

Several specimens, Santa Rosa Island, July (Eisen).

Dendryphantes æneolus *Curtis*. Zoe, III, 1892, p. 332.

Several specimens from Palo Alto (Baker).

Dendryphantes harfordi *Peckham*. Trans. Wisc. Acad. Sci. VII, 1888, p. 51.

Described from California, as a *Pseudicius*, but it does not belong to that genus; Claremont (Baker).

Thiodina retarius *Hentz*. Spid. U. S. 1875, p. 161.

From Yreka, Siskiyou County, June (Fuchs); San Francisco (Fuchs); Los Angeles (Hutchinson); Claremont (Baker).

Pellenes signatus *Banks*. Can. Entom. 1900, p. 101.

A few specimens from Los Angeles (Davidson).

Pellenes elegans *Peckham*. Bull. Wisc. N. H. Soc. 1900, p. 220, 1901.

One male from San Pedro (Cockerell).

Pellenes tarsalis Banks. Journ. N. Y. Ent. Soc. 1904,
p. 118.

One male from San Pedro (Cockerell).

Pellenes californicus Banks. Journ. N. Y. Ent. Soc. 1904,
p. 117.

One male from San Diego.

Pellenes pacifica n. sp.

PLATE XXXIX, FIG. 37.

Length ♂ 4 mm. Cephalothorax dark red-brown, with black hairs, a long black fringe over the first eye-row; clypeus snow-white, with white scale-like hairs and longer fine white hairs; palpi mottled; sternum pale, darker on the sides; legs reddish-brown on basal joints, much paler on apical joints; abdomen black, with black hairs, an oblong, oblique white spot on each side near the middle, and behind on the median line is a small white spot, followed by two still smaller ones; venter pale. Of the usual structure; first pair of legs not much stouter than the others; leg III a little longer than leg IV, the patella simple. The male palpus short, the palpal organ flat and broad, with two elevated humps when seen in side view, both of the black projections on the inner side and starting near base, curving upward.

One male from San Francisco, July (Fuchs), known by the general black color, simple patella, white clypeus, and shape of the male palpus.

Pellenes speciosa n. sp.

PLATE XL, FIG. 39.

Cephalothorax black, sparsely clothed with white and gray hair, a dark gray tuft at each anterior corner, which overlaps the heavy cream-white crest of hair over the eyes, the latter surrounds the eyes of the first row, the narrow clypeus is snow-white; the base of mandibles scarlet, with two black spots, apex yellowish; sternum and coxæ yellowish, with long white hair; legs mostly brown, the metatarsi and tarsi yellowish, mostly clothed with appressed white and erect black hair; leg I, however, has a dense brush of long bright red hair under apex of femora, whole of patella, and base of tibia, this when leg is flexed projects out each side; the tibia is yellowish, and has a black stripe on each upper side, but without long hair, the metatarsi yellowish, the tarsi jet black on apical half, basal part yellowish; the male palpus has black and white hair, but the tarsus is outside clothed with long bright red hair; venter pale, with three black stripes; dorsum (partly broken) is black, and clothed with white scales on base, and two oblique white bands each side,

the last reaching toward spinnerets. The cephalothorax is rather long, the legs quite short, and patella III simple. A female is similar, with white clypeus; black abdomen, with a median white herring-bone stripe, and white along sides.

Length 5 mm.

One pair from Claremont (Baker).

***Epiblemum palpalis* n. sp.**

PLATE XXXIX, FIG. 31.

Cephalothorax iridescent golden or purplish, with some white scales, a broad white band just behind the dorsal eyes, side margins narrowly white, clypeus with a few white hairs; mandibles black, paler on tips; palpi wholly pale yellowish, clothed with white hair; legs dark on femora, on patella and tibia I beneath, and on patella, tibia, and metatarsus IV, rest of legs mostly pale, a pale stripe above on femora I and II; sternum dark. Abdomen black, with black and some yellowish scales; three transverse white bands, one basal, one before middle, and one toward tip, a narrow white band encircles the spinnerets; these middle bands are straight across and not oblique as in *E. scenicum*; venter dark, clothed with black and white hair. Structure in general similar to that of *E. scenicum*, but the cephalothorax is plainly longer than in that species.

Length 5 mm.

One female from Palo Alto (Baker).

***Metacyrba similis* n. sp.**

PLATE XXXVIII, FIG. 9.

In general this species is similar to *M. tæniola*, but the abdomen has two unbroken white stripes, instead of two rows of dots; the venter is pale. The cephalothorax is a trifle shorter and broader proportionately than in *M. tæniola*; the male palpus has a shorter and broader palpal organ, the two long tibial hooks very similar to *M. tæniola*, but with the addition of a smaller tubercle at their base; the bulb is broader, especially at base, than in the other species.

Length ♂ 5.5 mm.

One male from Los Angeles (Hutchinson.)

***Metacyrba tæniola* Hentz.** Spid. U. S. 1875, p. 56.

One from Claremont (Baker).

***Marpissa melanognathus* Lucas.** Hist. Nat. d'Iles Canar.
II, 1839, p. 29.

Mt. Diablo, Contra Costa County (Fuchs); Sebastopol, Sonoma County (Fuchs).

Marpissa californica *Peckham*. Trans. Wisc. Acad. Sci. VII, 1888, p. 81.

Yreka, Siskiyou County, June (Fuchs); San Francisco, June (Eisen); Mill Valley, Marin County, May (Fuchs); Calaveras Creek, Alameda County, June (Fuchs).

Epiblemum scenicum *Clerk*. Svensk. Spindl. 1757, p. 117.
Santa Barbara Island (Fuchs).

Attus dorsatus *Banks*. Can. Entom. 1895, p. 97.
Described from Southern California.

Sidusa morosa *Peckham*. Trans. Wisc. Acad. Sci. VII, 1888, p. 71.

One female from Mt. Diablo, Contra Costa County, (Fuchs).

Sassacus popenhœi *Peckham*. Occ. Papers, Wisc. N. H. Soc. II, 1895, p. 177.

One specimen from St. Helena, Napa County, July (Fuchs).

PHALANGIDA.

PHALANGIDÆ.

Liobunum exilipes *Wood*. Comm. Essex Inst. 1869, p. 32.

Specimens from Claremont, October (Baker); Mt. Shasta (Lembert); Santa Rosa Island, July (Eisen).

Liobunum bimaculatum *Banks*. Can. Entom. 1893, p. 210.

A few specimens from San Diego.

Leuronychus pacificus *Banks*. Can. Entom. 1894, p. 162.

Mt. Shasta (Lembert).

Mitopus californicus Banks. Journ. N. Y. Ent. Soc.
1895, p. 66.

From Los Angeles (Davidson).

Leptobunus californicus Banks. Can. Entom. 1893, p. 210.

From Los Angeles (Davidson).

Globipes spinulatus Banks. Can. Entom. 1893, p. 208.

A few specimens from Southern California.

Eurybunus spinosus Banks. Journ. N. Y. Ent. Soc.
1895, p. 66.

From Los Angeles (Davidson).

Eurybunus brunneus Banks. Can. Entom. 1893, p. 209.

One specimen from Southern California.

Protolophus tuberculatus Banks. Plate xxxviii, Fig. 19.
Banks, Can. Entom. 1893, p. 206.

Specimens from Mill Valley, Marin County, May
(Fuchs); Santa Rosa Island, July (Eisen); Santa Cata-
lina Island, Claremont, and Santa Clara County (Baker).

Protolophus singularis Banks. Can. Entom. 1893, p. 207.

One from Southern California (Marx).

NEMASTOMATIDÆ.

Taracus pallipes Banks. Can. Entom. 1894, p. 161.

Two specimens from Mt. Shasta (Lembert).

Taracus spinosus Banks. Psyche, March 1894, p. 51.

One from Southern California.

Phlegmacera sp.

Immature specimen from Santa Clara County (Baker).

Nemastoma modesta Banks. Psyche, March 1894, p. 52.

Specimens from Mt. Shasta (Lembert); Santa Clara
County and Claremont (Baker).

TROGULIDÆ.

Ortholasma rugosa *Banks*. Plate xxxviii, Fig. 16. *Banks*,
Psyche, 1894, p. 12.

Laundry Farm, Alameda County, April (Fuchs), one
specimen; others from Claremont (Baker).

Dendrolasma mirabilis *Banks*. Plate xxxviii, Fig. 17.
Banks, Psyche, 1894, p. 12.

Coulterville, Mariposa County, July (Eisen), one
specimen.

COSMETIDÆ.

Cynorta bimaculata *Banks*. Trans. Amer. Ent. Soc. xx,
1893, p. 150.

The type is from San Diego.

Sitalces californica *Banks*. Plate xxxviii, Fig. 18. *Banks*,
Trans. Amer. Ent. Soc. 1893, p. 151.

Mill Valley, Marin County, May (Fuchs), one speci-
men; Mt. Shasta (Lembert).

Scotolemon californica *Banks*. Journ. N. Y. Ent. Soc.
1900, p. 200.

Described from Alabaster Cave, Placer County.

SOLPUGIDÆ.

Eremobates californica *Simon*. Class des Galéodes, 1879,
p. 143 (Datames).

Downieville, Sierra County, August, (Fuchs); Laun-
dry Farm, Alameda County, June (Fuchs); San Diego;
Alameda County, August (Eisen); Sonoma County.

Hemerotrecha californica *Banks*. Entom. News, 1903,
p. 79.

Taken by Dr. Harold Heath at Pacific Grove, running
in the sunshine.

PSEUDOSCORPIONIDA.

CHELIFERIDÆ.

Chelifer cancroides *Linnaeus*. Syst. Nat. ed. XII, 1767,
p. 1028.

Specimens from Lake Tahoe (Hubbard).

Chelifer scabrisculus *Simon*. Ann. Ent. Soc. France,
1878, p. 154.

Specimens from Southern California (Curtice).

Chelanops acuminatus *Simon*. Ann. Soc. Ent. France,
1878, p. 155.

A few specimens from Los Angeles (Davidson).

Chelanops validus *Banks*. Journ. N. Y. Ent. Soc. 1895,
p. 7.

From Lake Tahoe, July (Hubbard).

Chelanops dorsalis *Banks*. Journ. N. Y. Ent. Soc. 1895,
p. 8.

Described from Lake Tahoe, July (Hubbard).

OBISIIDÆ.

Ideobisium threveneti *Simon*. Ann. Soc. Ent. France,
1878, p. 156.

Ideoroncus obscurus *Banks*. Can. Entom. 1893, p. 67.

One specimen from Lake Tahoe (Hubbard).

Obisium macilentum *Simon*. Ann. Soc. Ent. France, 1878,
p. 156.

One from Southern California (Curtice).

Blothrus californicus *Banks*. Can. Entom. 1891, p. 165.

From Southern California (Curtice).

SCORPIONIDA.

Uroctonus phaiodactylus Wood. Journ. Acad. Nat. Sci. Phil. 1863, p. 372.

Specimens from Claremont, October (Baker); Cuyamaja Mountains, San Diego County (Fuchs); Santa Cruz Mountains (Badger).

Uroctonus mordax Thorell. Ann. Mag. Nat. Hist. (4), xvii, 1876, p. 11.

Specimens from Lakeside (Baker); Sausalito, Marin County; Alameda County; Fresno County; Santa Rosa Island; San Francisco and Sonoma (Troyer).

Hadrurus hirsutus Wood. Journ. Acad. Nat. Sci. Phil. v, 1863, p. 367.

From Indio, Salton, San Bernardino County, and Tulare.

Vejovis punctipalpi Wood. Journ. Acad. Nat. Sci. Phil. v, 1863, p. 369.

Several from San Bernardino County.

ACARINA.

RHYNCHOLOPHIDÆ.

Rhyncholophus gracilipes n. sp.

PLATE XLI, FIG. 56.

Length 3 mm. Body oblong, almost twice as long as broad, slightly constricted at hind and middle legs, broadly rounded behind; clothed above with many short, almost clavate hairs, below these are simple, but fully as dense; on the legs they are simple. Dorsal groove short, not reaching far on body, enlarged at each end. Legs slender; leg 1 about as long as the body, its last joint swollen and about two-thirds as long as the preceding joint; leg iv longer than the body and extending much beyond it, the last joint is swollen and scarcely one-third as long as the preceding joint; this, the penultimate joint, has on its under surface many stiff bristles, and a half whorl of them at its tip. Palpus of moderate size; femur not greatly swollen, tibia short and swollen above, claw large and stout with a tooth on inner surface, thumb large, rather clavate; all with long scattered hairs.

Several specimens from Santa Rosa Island, July (Eisen).

BDELLIDÆ.

Bdella californica n. sp.

PLATE XLI, FIG. 60.

Body white, legs and palpi pale yellowish brown beyond base. Body narrowed in front to beak; an eye each side on cephalothorax, four bristles above, a short pair in front, and a longer one each side beyond eye; abdomen with a few short hairs above; legs rather slender, iv pair much the longest. Basal joint of palpus more than one-half length of mandibles, second and third together not as long, the latter the longer of the two, apical joint as long as basal, slightly larger at tip than elsewhere, with two long bristles on tip, the larger one nearly as long as the joint, several shorter bristles near tip.

Length 1.1 mm. (except beak).

A few specimens from Claremont (Baker).

EUPODIDÆ.

Rhagidia pallida Banks. Trans. Amer. Ent. Soc. xxi, 1894, p. 222.

Two specimens from Claremont (Baker.)

TETRANYCHIDÆ.

Tetranychus mytilaspidis Riley. Hubbard's Orange Insects, 1885, p. 216.

Various parts of Southern California, on orange.

Tetranychus sexmaculatus Riley. Insect Life, II, p. 225.

Also on orange, San Diego, Los Angeles, etc.

Tetranychoides californica Banks. Journ. N. Y. Ent. Soc. 1904, p. 54.

On the under surfaces of orange leaves, Watsonville (Volck).

Tenuipalpus californicus Banks. Journ. N. Y. Ent. Soc. 1904, p. 55.

On orange peel, Redlands (Pease).

ORIBATIDÆ.

Liacarus modestus n. sp.

PLATE XLI, FIGS. 53 AND 59.

Body pale reddish brown, legs pale yellow. Cephalothorax with four ridges and four long bristles above, setæ very short, capitate, two short bristles in front; abdomen rather depressed, smooth (finely pitted under high power), dorsum with four rows of recurved bristles, about seven in a row; legs rather short; coxal plate in two parts, each part with a short sutural line to indicate coxæ, but the lines do not reach middle; three equal tarsal claws; the circular anal opening two and one-half times its diameter in front of the larger, elliptical anal opening.

Length .7 mm.

Many specimens from Los Angeles. Related to *L. unicolor* Banks, but differs therefrom in the much shorter setæ.

Oribata californica n. sp.

PLATE XLI, FIG. 52.

Abdomen red-brown; basal joints of legs brown, rest yellowish brown; cephalothorax brown. Cephalothorax with a pair of curved bristles in front, seta a long, erect, simple bristle; abdomen high, globose, above with a sub-median row each side of about seven or eight short, strongly-curved bristles; genital and anal apertures close together, the former the larger. Legs not very long, the joints greatly swollen in places; the tarsi long and slender, femora have several strongly-curved hairs, the hairs beyond are less curved; there is but one tarsal claw.

Length .85 mm.

One specimen from Mt. Shasta.

Phthiracarus cryptopus n. sp.

PLATE XLI, FIG. 50.

Body brown, more yellowish at base of abdomen, smooth and shining; legs pale. Cephalothorax with six bristles above, the anterior pair shorter than the others. Abdomen large and high, about one-fourth longer than broad, with two rows of fine hairs each side above, about five hairs in each row; other shorter hairs on the lower margin; ventral region very narrow, acute behind, divided before middle by a transverse notch; setæ are simple erect rods, barely thicker toward tip and not half as long as bristles. Legs very short, and hairy.

Length 1 mm.

Several specimens from Claremont (Baker).

GAMASIDÆ.

Gamasus californicus n. sp.

PLATE XLI, FIGS. 54, 55, AND 58.

Body yellowish, legs paler. Body subpyriform, but contracted slightly twice before the middle, broadly rounded behind, with a rather prominent bristle in front, and dorsum quite thickly clothed with curved hairs. Legs with long hairs and bristles; leg I slender, tarsus I with caroncle and claws rather weak; leg II of male heavy, a spur under femur, and a long tooth under tibia, tibia IV with one long spine below. Male mandibles simple. Peritreme nearly straight till in front of coxæ II, where it bends down, and then runs nearly straight forward, slightly upcurved at tip; venter smooth.

Length ♀ .8 mm; ♂ .6 mm.

A few specimens, from Claremont (Baker).

Laelaps pilosula n. sp.

PLATE XLI, FIG. 49.

Length 1.1 mm. Abdomen about twice as long as broad, narrowed at each end, rather broadly rounded in front, blunt pointed behind, broadest beyond middle. Dorsal scutum divided, the anterior part reaching nearly to middle of body, posterior portion semicircular and hardly reaching half way to tip of body. Soft parts of body with many fine hairs, hard parts with scattered, longer hairs, one each side on anterior scutum is much larger than the others; each scutum shows above, sometimes indistinctly a pair of small circular impressions. Venter shows no hard parts; but in front is the curved genital opening, and each side is an oblique dark mark. The legs are short, the first pair about as long as body, with no claws at tip. The epistoma is broad, and pointed in the middle. The peritreme is just behind the third legs, and shows a double line extending forward and upward.

A few specimens, Santa Rosa Island, July (Eisen).

IXODIDÆ.

Argas miniata Koch. Arch. f. Naturgesch. x, (1), 1844, p. 219.

Specimens from Lakeside (Baker).

Ornithodoros megnini Dugès. La Naturaleza Mexicana, vi, 1883, p. 196.

From Mt. Shasta, and Southern California (Curtice).

Dermacentor reticulatus *Fabricius*. Ent. Syst. iv, 1794, p. 428.

From Palo Alto (Baker) and Mt. Shasta (Lembert).

Hæmaphysalis concinna *Koch*. Arch. f. Naturgesch. x, 1844, p. 237.

From Claremont, on *Lophortyx californicus valloti* (Baker).

Ixodes angustus *Neumann*. Mém. Soc. Zool. France, 1899, p. 136.

Two from Siskiyou County, also received from Massett, British Columbia.

Ixodes californicus n. sp.

PLATE XLI, FIG. 57.

Shield reddish brown, paler in the middle, body brown, or yellowish brown; coxæ brown, rest of legs paler. Body sparsely clothed with white hairs. Shield longer than in *I. hexagonus*, yet not nearly as long as in *I. frontalis*, finely punctured; body of female oblong-elliptical. Coxæ i with a black hump behind toward tip, but no basal spine, coxæ ii and iii with a prominent subapical spine behind, coxæ iv with a small protuberance; tarsi i with two little humps above near Haller's organ.

Length ♀ 4 mm.

Several specimens from *Toxostoma crissalis*, Claremont (Baker).

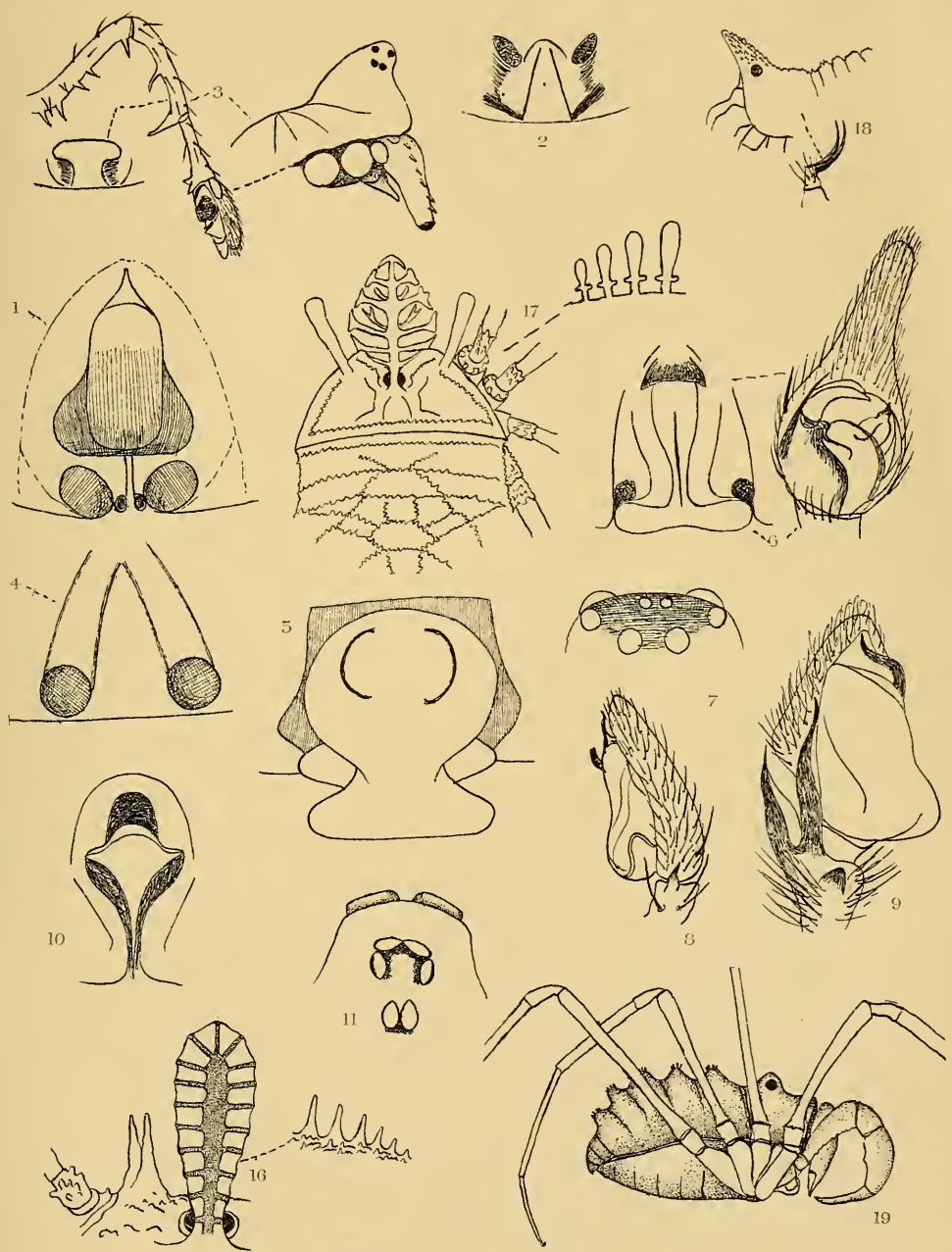
It can be easily distinguished by the shape of shield and armature of coxæ.

Ixodes hexagonus *Leach*. Trans. Linn. Soc. London, xi, 1815, p. 397.

Two females from Santa Clara County, and males from Palo Alto (Baker) and Mt. Shasta (Lembert). The shield is more nearly round than figured for European specimens, but the coxal armature is the same.

EXPLANATION OF PLATE XXXVIII.

- Fig. 1. *Zelotes femoralis*.
- Fig. 2. *Gayenna californica*.
- Fig. 3. *Erigone californica*.
- Fig. 4. *Cybæus minor*.
- Fig. 5. *Pardosa californica*.
- Fig. 6. *Lycosa pacifica*.
- Fig. 7. *Dictyolathys californica*.
- Fig. 8. *Drassodes californica*.
- Fig. 9. *Metacyrba similis*.
- Fig. 10. *Gnaphosa californica*.
- Fig. 11. *Leptoneta californica*.
- Fig. 16. *Ortholasma rugosa*.
- Fig. 17. *Dendrolasma mirabilis*.
- Fig. 18. *Sitalces californica*.
- Fig. 19. *Protolophus tuberculatus*.



EXPLANATION OF PLATE XXXIX.

- Fig. 13. *Pirata californica*.
- Fig. 14. *Pœcilochroa pacifica*.
- Fig. 15. *Zelotes pacifica*.
- Fig. 20. *Lophocarenum fasciatum*.
- Fig. 21. *Lophocarenum fasciatum*.
- Fig. 22. *Dictynina pallida*.
- Fig. 23. *Euryopsis californica*.
- Fig. 24. *Lophocarenum fasciatum*.
- Fig. 25. *Herpyllus validus*.
- Fig. 26. *Philodromus mœstus*.
- Fig. 27. *Xysticus californica*.
- Fig. 28. *Drassodes californica*.
- Fig. 29. *Herpyllus validus*.
- Fig. 30. *Philodromus mœstus*.
- Fig. 31. *Epiblemum palpalis*.
- Fig. 32. *Pardosa atromedia*.
- Fig. 33. *Drassinella modesta*.
- Fig. 34. *Theridium californicum*.
- Fig. 35. *Uloborus californicus*.
- Fig. 36. *Euryopsis californica*.
- Fig. 37. *Pellenes pacifica*.

